

DISCUSSION OF THE AMENDMENT

The specification has been amended to correct the reference to Example A, as can be confirmed by the last column in the table at page 15, since the only dicidol-free polyester is that described in Example A.

No new matter is believed to have been added by the above amendment. Claims 1-29 remain pending in the application.

REMARKS

The rejections under 35 U.S.C. § 103(a) of Claims 1, 5, 8, 9, 13, 14, 18-20, 25, 26, and 28 as unpatentable over U.S. 5,036,134 (Kunz et al), and of Claims 1, 5, 8, 9, 13, 14, and 25-29 as unpatentable over U.S. 6,048,936 (Epple et al), each one of Kunz et al and Epple et al in view of JP 09-124524 (JP '524), are respectfully traversed.

As recited in Claim 1, the present invention is a polymer-modified resin, comprising I) at least one hydroxy-functional or carboxy-functional polyester, and II) at least one glycidyl-containing polyacrylate, wherein said polyester I comprises an alcohol component containing of from 0.5 to 80 mol% of a dicidol fraction, and wherein said resin is obtained by free-radical polymerization of the starting component(s) for the preparation of said polyacrylate II in the presence of the polyester I in at least one organic solvent.

As described in the specification under "Description of the Related Art" beginning at page 1, line 11, Applicants recognize that the prior art has disclosed the production of resins by free-radical polymerization of polyacrylate-producing monomers in the presence of a polyester, although such resins and processes for producing them have been problematical. Kunz et al and Epple et al are examples of such prior art processes, although Applicants make no representation of particular problems associated therewith. However, as noted by the Examiner, and as described in the specification at page 2, line 13, the prior art does not disclose the use of dicidol-containing polyester to make such resins.

Applicants describe comparative data in the specification herein showing the significance of the use of dicidol-containing polyesters. The results are shown in the table at page 15 of the specification, reproduced below, wherein the properties of gloss, adhesion, pencil hardness an MEK test and a soot test, were carried out. The differences are manifest.

	Coating material from A), Dicidol-containing	Coating material from B), Dicidol-free
Gloss (60°)	93	82
Adhesion	GT 0	GT 1
Pencil hardness	H	HB-F
MEK test (double rubs)	> 100	50
Soot test (15', 80°C)	0 - 1	1

The Examiner relies on JP '524 as suggesting the incorporation of dicidol into the polyesters of Kunz et al or Epple et al, the motivation being that “the coloring control of polyesters is improved.”

Applicants respectfully submit that the Examiner has misinterpreted JP '524. JP '524 does **not** disclose that tricyclodecanedimethanol suppresses the coloring of a copolymerized polyester. Rather, JP '524 discloses that when ultraviolet-absorbing substances are extracted and removed from a tricyclodecanedimethanol compound, such color suppression is effected. In other words, there is no disclosure or suggestion that tricyclodecanedimethanol *per se* affects the color of a polyester produced therefrom. Thus, there is no motivation in the prior art to incorporate such a compound in the polyesters of Kunz et al or Epple et al. In addition, none of the prior art could have predicted the effect, as discussed above, that the presence of dicidol has on the properties tested.

For all the above reasons, it is respectfully requested that the rejections over prior art be withdrawn.

The rejection of Claims 2-4, 7, 10-12 and 15-17 under 35 U.S.C. § 112, second paragraph, in the recital of the trademark "Solvesso®", is respectfully traversed. **Submitted herewith** are information sheets from the manufacturer, i.e., ExxonMobil, which shows that Solvesso 150 is a class of aromatic fluid containing mainly higher molecular weight (C10-11) alkyl benzenes, as well as the properties of Solvesso 150. See

http://www.exxonmobilchemical.com/Public_Products/Fluids/Aromatics_HeavyAromatics.

It is unlikely that the name Solvesso 150 would be significantly changed by the manufacturer over time. Applicants respectfully submit that the use of the term is proper herein, and consistent with M.P.E.P. § 608.01(v). Nor is it even clear that the manufacturer treats the product as proprietary, since it appears in the above-discussed "aromatics" document without any trademark designation. In addition, **submitted herewith** is a printout from the USPTO Trademark Electronic Search System, showing that the federal trademark registration of the mark "Solvesso" has expired.

If the above explanation is not considered sufficient by the Examiner, Applicants have no objection to replacing the above-quoted term with --a C₁₀₋₁₁ aromatic fluid--.

For all the above reasons, it is respectfully requested that this rejection be withdrawn.

The objection to the disclosure in the description of "Solvesso®" is respectfully traversed. As discussed above with regard to the rejection under 35 U.S.C. § 112, second paragraph, it appears that the federal trademark registration of the mark "Solvesso" has expired. Regardless of whether the designated product still has trademark status and even if so, the manufacturer does not capitalize the name. Accordingly, it is respectfully requested that the objection be withdrawn.

Applicants gratefully acknowledge the Examiner's indication of allowability of the subject matter of Claims 6 and 21-24 unconditionally, and of Claims 2-4, 7, 10-12, and 15-17 if rewritten to overcome the above-discussed rejection under 35 U.S.C. § 112, second

Application No. 10/718,523

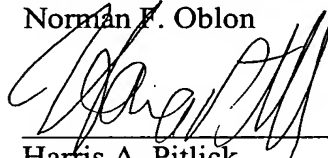
Reply to Office Action of November 16, 2005

paragraph. Nevertheless, Applicants respectfully submit that all of the presently-pending claims in this application are in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

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Aromatics

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What types of aromatic fluids are offered by ExxonMobil?

ExxonMobil Chemical offers several products where the aromatic content is typically 99.5 weight percent or higher. In addition to toluene and xylene, a set of heavy aromatic products are offered. The heavy aromatic products are trademarked Solvesso globally except in the U.S., where the products are known as Aromatic fluids.

[Back to Top](#)**Describe major differences in the aromatic fluids offered by ExxonMobil?**

The major difference is carbon number which in turn impacts the distillation range. Toluene, a C7 aromatic, is the lowest boiling aromatic fluid offered. The distillation range increases with carbon number, i.e. xylene (C8 aromatic), Solvesso 100 (C9-10 aromatic), Solvesso 150 (C10-11 aromatic) and Solvesso 200 (C10-14 aromatic). In the U.S. the corresponding names are Aromatic 100, Aromatic 150 and Aromatic 200.

[Back to Top](#)**What is the composition of these aromatic fluids?**

Toluene is methyl benzene. Xylene is a mixture of various dimethyl benzenes. Solvesso 100 is composed primarily of C9-10 dialkyl and trialkylbenzenes. Solvesso 150 contains mainly higher molecular weight (C10-11) alkylbenzenes, while Solvesso 200 is composed mainly of alkyl naphthalenes.

[Back to Top](#)**What is the naphthalene content of these aromatic fluids?**

Only the Solvesso 150 and Solvesso 200 grades (and the corresponding Aromatic 150 and Aromatic 200 grades) contain naphthalene, typically around 8 to 12 percent. However, grades with significantly reduced naphthalene contents are available. (See next question.)

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What do naphthalene depleted and ultra-low naphthalene mean?
ExxonMobil Chemical offers grades with reduced naphthalene content to

meet classification and labeling requirements. Naphthalene depleted (ND) indicates a naphthalene content of less than 1.0 weight percent, while ultra-low naphthalene (ULN) indicates a content of less than 0.1 weight percent.

In early 2002 IARC (International Agency for Research on Cancer) classified naphthalene as a category 2B carcinogen (possibly carcinogenic to humans). In the U.S. products containing greater than 0.1 weight percent naphthalene are required to reflect this classification on the Material Safety Data Sheet (MSDS). To address this requirement, ExxonMobil Chemical has commercialized two grades, Aromatic 150 ULN and Aromatic 200 ULN. The naphthalene depleted versions of these grades continue to be offered, which have naphthalene concentrations less than 1.0 weight percent.

In Europe it is expected that a similar ruling will be made, and that products containing greater than 1.0 weight percent naphthalene will be affected. In anticipation of this requirement, ExxonMobil offers Solvesso 150 ND and Solvesso 200 ND Fluids.

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What are the applications in which ExxonMobil aromatic fluids are used?

The two primary applications are agricultural chemicals and coatings. In agriculture applications, for example, aromatic fluids can be used as solvents for active ingredients, typically in emulsifiable concentrates. In coatings they are used as solvents in architectural and industrial coatings applications. In both applications the high solvency of the aromatic fluids is key to their performance.

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What is the benzene content of the heavy aromatic fluids?

The benzene content of ExxonMobil Chemical's heavy aromatic fluids (Aromatic 100, 150 and 200 and Solvesso 100, 150 and 200) is typically less than 1 ppm.

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Which aromatic fluids are used in coatings?

The lighter aromatic fluids, such as toluene, xylene and Solvesso 100 fluid (or Aromatic 100 fluid) are primarily used in coatings applications. These products offer good solvency and a range of evaporation rates to meet performance needs.

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Which fluids have the lowest hazardous air pollutants (HAPs) levels?

Of the aromatic fluids offered by ExxonMobil Chemical, Aromatic 100 has the lowest HAPs content (as defined by U.S. EPA), less than 3.4 percent. The HAPs content of Aromatic 150 is less than 10.1 percent. For the other aromatic fluids (toluene, xylene, Aromatic 200), the HAPs concentration is 100 percent.

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Why replace xylene with Aromatic 100 Fluid in paint & coatings?

In the U.S. the main reason is compliance with regulations such as HAPs, SARA, CERCLA and RCRA. Compared to xylene, the use of Aromatic 100 fluid results in more than a 96 percent reduction of HAPs and more than a 60 percent reduction in SARA 313 reportables. In addition, the benzene content is reduced, which may favorably affect the hazardous waste classification. All of these advantages provide the customer more flexibility in complying with regulatory demands. As an added benefit, resin-solvent compatibility is improved for most resins.

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SOLVLESSO™ 150 FLUID

Hydrocarbon Fluid

Product Properties

Property	Test Method	Unit	Typical Value
Aromatics Content	ASTM D 1319	vol%	>99
Color	ASTM D 156	Saybolt	30
Distillation range	ASTM D 86	°C	
Initial boiling point			186
Dry point			204
Flash Point	ASTM D 56	°C	66
Kauri-Butanol Value	ASTM D 1133	-	94
Specific Gravity	ASTM D 4052	15.6 °C/15.6 °C	0.897

Notes:

Values indicated describe typical physical properties and do not constitute specification limits. This product typically contains less than 1 ppm benzene and less than 1 ppm sulfur.

South/Central America

February 2004

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Goods and Services	(EXPIRED) IC 002. US 016. G & S: HYDROCARBON SOLVENTS FOR USE WITH PAINTS, LACQUERS, AND SIMILAR PRODUCTS. FIRST USE: 19340514. FIRST USE IN COMMERCE: 19340514
Mark Drawing Code	(1) TYPED DRAWING
Design Search Code	
Serial Number	71352683
Filing Date	June 14, 1934
Current Filing Basis	1A
Original Filing Basis	1A
Registration Number	0318875
Registration Date	November 6, 1934
Owner	(REGISTRANT) STANDARD OIL COMPANY OF NEW JERSEY CORPORATION DELAWARE 7 WEST 10TH STREET WILMINGTON DELAWARE
Assignment Recorded	ASSIGNMENT RECORDED
Type of Mark	TRADEMARK
Register	PRINCIPAL
Renewal	2ND RENEWAL 19741106
Live/Dead Indicator	DEAD

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Goods and Services	(EXPIRED) IC 005. US 006. G & S: HYDROCARBON SOLVENTS FOR CHEMICAL, MEDICINAL, AND PHARMACEUTICAL PURPOSES. FIRST USE: 19340514. FIRST USE IN COMMERCE: 19340514
Mark Drawing Code	(1) TYPED DRAWING
Design Search Code	
Serial Number	71352682
Filing Date	June 14, 1934
Current Filing Basis	1A
Original Filing Basis	1A
Registration Number	0318870
Registration Date	November 6, 1934
Owner	(REGISTRANT) STANDARD OIL COMPANY OF NEW JERSEY CORPORATION DELAWARE 7 WEST 10TH STREET WILMINGTON DELAWARE
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